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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,658	01/28/2002	Michael J. Pollack	200285.0689/670U1	3856

570 7590 12/09/2003

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2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103-7013

EXAMINER	
LEE, RICHARD J	

ART UNIT	PAPER NUMBER
2613	7

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/058,658	POLLACK, MICHAEL J.	
	Examiner	Art Unit	
	Richard Lee	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Qureshi et al of record (5,956,077).

Qureshi et al discloses an inspection method and apparatus for tanks, and the same optical monitoring system as claimed in claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 for transmitting images from a hostile environment within the interior of a sealed chamber to the chamber exterior, the chamber having a wall and an access port extending through the wall (see Figures 2, 4, 5, column 2, lines 41-47), the monitoring system comprising the same flexible, generally tubular, elongated housing having a distal end, a proximal end and an interior (see 31, 32, 37, 38, 41 of Figures 2 and 8), the housing being made of non-porous, hermetically seal, corrosive resistant material, the distal end of the housing including a sealed window, wherein the window is formed from a material selected from the group consisting of synthetic sapphire, glass, quartz and a polymeric material, wherein the window is secured to the housing by a method selected from the group consisting of brazing, fusion, and an adhesive (see window in front of elements 39, 41, 48-51 of Figure 8), the proximal end of the housing being sealingly secured to the chamber wall at the access port so that the interior of the housing is accessible through the port (see 37 of Figure 2), the interior of the housing including a transmission media for transmitting images of the interior of the chamber obtained through the window from the

distal end of the housing to the proximal end of the housing and through the port (see 41 of Figures 2 and 8, and column 3, lines 41-51, column 4, lines 3-16, lines 37-67); a monitor located outside of the chamber and connected to the transmission media for receiving and displaying the recorded images of the interior of the chamber (i.e., 67 of Figure 9, and see column 3, lines 41-51, column 4, lines 3-16, lines 37-67); a video camera (i.e., 41 of Figures 2 and 8) positioned to record images of the interior of the chamber through the window; a sensor (i.e., 41 of Figures 2 and 8) for sensing a parameter of the hostile environment through the window, and an apparatus (i.e., 67 of Figure 9) located outside of the chamber and connected to the transmission media for receiving and processing the sensor signal and displaying a representation of the sensor signal.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2, 11, 18, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (2), and further in view of Stattuck et al of record (4,591,794).

Qureshi et al discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing comprises a flexible sheath formed of a stainless steel bellows as claimed in claims 2, 11, 18, and 25. The particular use of stainless steel bellows for housing structures associated with borescopes and monitoring of chambers, however is old and well recognized in the art, as exemplified by Stattuck et al (see column 3, line 64 to column 4, line 30). Therefore, it would have been obvious to one of ordinary skill in the art,

having the Qureshi et al and Stattuck et al references in front of him/her and the general knowledge of housing structure materials within monitoring systems, would have had no difficulty in providing the stainless steel bellows structure as taught by Stattuck et al for the housing of Qureshi et al for the same well known support and protection of the housing purposes as claimed.

5. Claims 3, 12, 19, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (2), and further in view of Chiodo of record (4,540,258).

Qureshi et al discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing comprises a flexible polymeric tube as claimed in claims 3, 12, 19, and 26. The particular use of flexible polymeric tubes for housing associated with camera monitoring devices, however is old and well recognized in the art, as exemplified by Chiodo (see 54 of Figure 1 and column 4, lines 48-53). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al and Chiodo references in front of him/her and the general knowledge of housing structure materials within monitoring systems, would have had no difficulty in providing the flexible polymeric tube structure as taught by Stattuck et al for the housing of Qureshi et al for the same well known support, protection, and flexible movement of the housing purposes as claimed.

6. Claims 6, 7, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (2), and further in view of Howell et al of record (3,778,170).

Qureshi et al discloses substantially the same optical monitoring system as above, but does not particularly disclose wherein the housing includes a borescope having a viewing end which is aligned with the sealed window, the interior of the housing including a flexible borescope for transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of the housing and through the port, a monitor located outside of the chamber and connected to the borescope for receiving and displaying images of the interior of the chamber, and wherein the transmission media is comprised of fiber optic bundle as claimed in claims 6, 7, and 17. However, Howell discloses a borescope guide tube as shown in Figure 2, and teaches the conventional use of a fiber optic bundle borescope (i.e., 62 of Figure 2, and see column 2, line 53 to column 3, line 7) having a viewing end which is aligned with a sealed window (see Figure 2), the interior of the housing including a flexible borescope for transmitting images of the interior of the chamber obtained through the window from the distal end of the housing to the proximal end of the housing and through the port (see Figure 2, and column 4, lines 27-49, column 6, lines 32-65), and a monitor (see column 5, lines 12-30) located outside of the chamber and connected to the borescope for receiving and displaying images of the interior of the chamber. Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al and Howell et al references in front of him/her and the general knowledge of borescopes for transmitting and monitoring images, would have had no difficulty in providing the fiber optic bundle borescope for

transmitting and monitoring of images as taught by Howell as part of the chamber monitoring within Qureshi et al for the same well known transmission and monitoring of images from a fiber optic borescope purposes as claimed.

7. Claims 8, 15, 16, 22, 24, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qureshi et al as applied to claims 1, 4, 5, 9, 10, 13, 14, 23, 27, 28, 30, and 31 in the above paragraph (2), and further in view of Braithwaite et al of record (US 2002/0116987 A1).

Qureshi et al discloses substantially the same optical monitoring system as above, but does not particularly disclose the followings:

(a) wherein the interior of the housing is provided with a fluid under pressure to control the environment within the interior of the housing as claimed in claims 8, 16, 22, and 29;

(b) wherein the camera is an infrared camera as claimed in claim 15; and

(c) wherein the sensor is selected from the group consisting of temperature sensor, a pressure sensor, an oxygen sensor and a spectra graphic chemical analysis sensor as claimed in claim 24.

Regarding (a) to (c), Braithwaite et al discloses an apparatus and method for measuring extensional rheological properties of a material as shown in Figure 1, and teaches the conventional fluid pressure control of an environment within the interior of a housing, temperature sensors, and the use of infrared cameras for monitoring elements within the housing (see sections [0034], [0039], [0040] of page 3, section [0044] of page 4). Therefore, it would have been obvious to one of ordinary skill in the art, having the Qureshi et al and Braithwaite et al references in front of him/her and the general knowledge of interior environment controls

within hostile chambers, would have had no difficulty in providing the infrared camera, temperature sensor, and fluid pressure control system as taught by Braithwaite et al for the interior of the housing of Qureshi et al for the same well known temperature sensing, infrared imaging, and fluid pressure control of a hostile chamber environment purposes as claimed.

8. Regarding the applicant's arguments at pages 9-12 of the amendment filed October 1, 2003 concerning in general that "... the tank car which is disclosed in the Qureshi et al patent is not a sealed chamber as that term is defined and understood by claim 1. it is clear that the tank car includes an opening (the manway opening) which is totally open to atmosphere, at least when the apparatus of Qureshi et al patent is being employed for inspecting the interior of the tank car. Further, as noted above, the upper end of the vertically oriented support (20) appears to be open to atmosphere, further confirming the fact that the interior of the tank car is not "a sealed chamber" at least at the time that the interior is being inspected by the Qureshi et al device ...", the Examiner wants to point out that even though there may be a manway opening 17 within the tank car of Qureshi et al, it is submitted that such manway when not in use is in a closed state. The applicant's attention is directed to column 2, lines 44-47 of Qureshi et al wherein it is taught that tank cars, underground and above-ground storage tanks as well as other **closed chambers** may be inspected. Further, at column 2, lines 41-43, Qureshi et al teaches that system 10 is capable of remotely visually inspecting the interior of a large **enclosed space** such as that of a railroad tank car 11. Both of these cited sections of Qureshi et al confirm the fact that the tank car of Qureshi et al is a sealed chamber.

Regarding the applicant's arguments at pages 12-13 of the amendment filed October 1, 2003 concerning in general that "... the Qureshi et al housing is not "hermetically sealed" nor is

the housing "generally tubular" ... while arguably each individual articulated segments may be considered to be "generally tubular" each of the individual articulated segments, themselves, are not flexible but, instead, they appear to be quite rigid in order to permit the apparatus to function as described ... Claim 1 of the present application further calls for the distal end of the housing to include "a sealed window" ... Since the Qureshi et al device is employed for inspecting the interior of an empty tank car, there is no need for providing such a sealed window because the camera and other sensitive devices are clearly not expected to be exposed to a hostile environment ...", the Examiner respectfully disagrees. It is clearly evident in Figure 8 of Qureshi et al that a window is being provided to protect elements 39, 41, 48-51 within the housing 31, and that the housing 31 is "generally tubular" as claimed. Since the housing 31 is capable of being moved around with the use of servo motors 42 and 44 so that the camera 41 may be strategically place to view the desired images (see column 3, lines 16-51), it is submitted that housing 31 is considered flexible. And contrary to the applicant's contention, the housing 31 is in fact being submitted to a hostile environment (i.e., chemicals, and harmful or toxic vapors may exist in the tank, see column 1, lines 13-39). This confirms that fact that not only is there a window to protect elements 39, 41, and 48-51, but that such housing is provided a hermetically sealed window. Otherwise, elements 39, 41, and 48-51 of Figure 8 of Qureshi et al will be damaged by the chemicals and toxic vapors in the hostile environment. The Examiner wants to further point out that: One of ordinary skill in the art is presumed to possess a certain amount of background knowledge independent of the references. In re Sovish, 769 F.2d 738, 226 USPQ 771 (Fed. Cir. 1985); In re Jacoby, 309 F.2d 513, 135 USPQ 317 (C.C.P.A. 1962). The conclusion of obviousness may be made from common knowledge and common sense of a

person of ordinary skill in the art without any specific hint or suggestion in a particular reference. In re Bozek, 416 F.2d 1385, 163 USPQ 545 (C.C.P.A. 1969). For the above reasons, it is further submitted that Qureshi et al anticipates the claimed invention.

Regarding the applicant's arguments at page 13 of the amendment filed October 1, 2003 concerning in general that "... claim 1 calls for the proximal end of the housing to be "sealingly secured" to the chamber wall for the purpose of maintaining the sealed interior of the housing ... There is no teaching or suggestion that the conical guide could in any way form a seal with the mouth of the manway ... the upper end of the support (20) is clearly open to atmosphere ...", the Examiner wants to point out that since conical guide 23 of Figure 2 of Qureshi et al provides the support casing to self-align with the mouth of the manway 17 (see column 2, line 64 to column 3, line 15), it is submitted that such connection of the support casing to the mouth of the manway 17 provides the sealingly securing of the proximal end (i.e., 37 of Figure 2) of the housing to the chamber wall at the access port (i.e., the mouth of the manway 17), as claimed. It is clear that the conical guide of Qureshi et al must provide the sealed support to the wall, or the conical guide along with all the associated parts would fall right into the chamber.

Regarding the applicant's arguments at pages 13-14 of the amendment filed October 1, 2003 concerning the rejection of dependent claims 4, 5, 13, 14, and 27, the Examiner wants to point out that such arguments have been addressed in the above.

Regarding the applicant's arguments at pages 14-15 of the amendment filed October 1, 2003 concerning in general that "... The Examiner has improperly combined the Qureshi et al and Shattuck et al patents. The Examiner has not pointed to an objective teaching in the Qureshi et al patent which would lead one skilled in the art to combine it with the Shattuck et al patent ...

the Qureshi et al patent actually teaches away from such a combination because, as noted above, the Qureshi et al patent is not concerned with inspecting the interior of a sealed chamber, but, instead, is involved with inspecting the interior of an open chamber namely an open railroad tank car ...", the Examiner respectfully disagrees. It is submitted again that it is considered obvious to provide the stainless steel bellows structure as taught by Stattuck et al for the housing of Qureshi et al, since such structured support will provide the required protection of the housing as claimed. As such, it is further submitted that the combination of Qureshi et al and Stattuck et al is properly combined and renders the claimed invention obvious for reasons above.

Regarding the applicant's arguments at pages 15-16 of the amendment filed October 1, 2003 concerning in general the rejection of claims 3, 12, 19, and 26 in view of the combination of Qureshi et al and Chiodo, the Examiner wants to point out that such arguments have been addressed in the above.

Regarding the applicant's arguments at pages 16-17 of the amendment filed October 1, 2003 concerning in general that "... the Qureshi et al patent teaches away from the use of a borescope with a Qureshi-type housing ... Howell et al teaches away from the use of an articulating apparatus of the type disclosed in the Qureshi et al patent. Accordingly, both the Qureshi et al and Howell et al patents teach away from the combination of these two references and, therefore, the double reference rejection must fail ...", the Examiner respectfully disagrees. It is submitted that it is considered obvious to provide the fiber optic bundle borescope for transmitting and monitoring of images as taught by Howell et al as part of the chamber monitoring within Qureshi et al, and thus rendering the claimed invention obvious.

Regarding the applicant's arguments at pages 17-18 of the amendment filed October 1, 2003 concerning in general that the combination of Qureshi et al patent and the Braithwaite publication is improper because the Examiner has failed to point to a specific objective teaching in either reference which would support their combination, the Examiner respectfully disagrees. It is submitted again that the infrared camera, temperature sensor, and fluid pressure control system as taught by Braithwaite et al may certainly be provided for the interior of the housing of Qureshi et al, thus rendering the claimed invention obvious.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any response to this final action should be mailed to:

Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications; please mark "EXPEDITED PROCEDURE") (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Lee whose telephone number is (703) 308-6612. The Examiner can normally be reached on Monday to Friday from 8:00 a.m. to 5:30 p.m, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group customer service whose telephone number is (703) 306-0377.

RICHARD LEE
PRIMARY EXAMINER

Richard Lee/rl

12/5/03